

Work Order ID 131993***131993***

Page 1

Item ID: D3303-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Plate

Start Date: 4/20/15

Start Qty: 2.00

2

Cust Item ID:

Required Date: 4/20/15

Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan: MCSDate: 1504-23

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3303

Rev B

100

0.00

100

FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D3303

Dwg Rev: BProg Rev: B 2-

Deburr if necessary

20Jm 15-4-302024.032

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

20Jm 15-4-30

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.00

Quality Control

(2)

DAS

38

9-89

APR 30 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

131993

Page 2

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 4/20/15 **Start Qty:** 2.00 ***2***

Cust Item ID:

Required Date: 4/20/15 **Req'd Qty:** 2.00 ***~***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run** **Start** ***NR1***
 QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** ***NR2***

[illegible]

140	QC3- Inspect Part Finish	0.00	
140			<u>2</u> <u>FF</u> _____
QC	Memo	0.00	
Quality Control			

150	Identify as per dwg & Stock Location: <u>57401</u>	0.00	
150			DAB
Packaging	Memo	0.00	27
Packaging			\$ 89
			MAY 05 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	OTHER : _____							
Misidentified	☐	Past Due								

Work Order ID 131993

Tuesday, April 21, 2015 1:59:30 PM

131993

Page 3

Item ID: D3303-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Plate

Stop ***NS2***

Start Date: 4/20/15 Start Qty: 2.00

2

Cust Item ID:

Required Date: 4/20/15 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Memo

0.00

Quality Control

MLS

MAY 05 2015

MLS

MAY 05 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Tuesday, April 21, 2015 1:59:29 PM

Page 1
1

Work Order ID: 131993

131993

Parent Item: D3303-1

D3303-1

Parent Item Name: Plate

Start Date: 4/20/15

Required Date: 4/20/15

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP: A04.09.07New issueKJ/JLM
IPP Rev:B 06-06-28 Now On Waterjet JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.032		Purchased		No		100	sf	54.9060	0.3542	1			
M2024T3S 032										**		Jm 15-4-30	
2024-T3 .032 sheet													

Location

Loc Qty

Loc Code

MAT022

54.906

M130497

54.906

130497.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

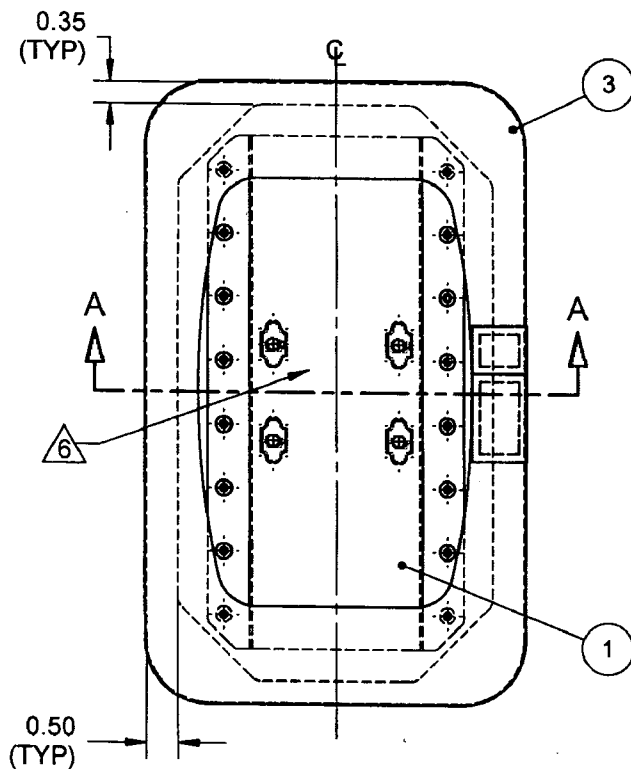
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			



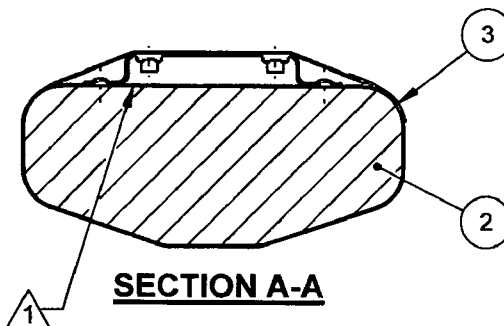
DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3303	REV. B SHEET 1 OF 4
DATE 06.08.17		TITLE HEAD REST	SCALE 1:3
REV A	DATE 04.08.18	DESCRIPTION NEW ISSUE	
B	06.08.17	UPDATED FLAT PATTERN TO FORM PART IN ONE OPERATION USING OFFSET DIE	



RELEASED

06-09-19 *[Signature]*

DEO ATTACHED



D3303-041 HEAD REST

ITEM	QTY -041	P/N	DESCRIPTION
	X	D3303-041	HEAD REST
1	1	D3303-043	BRACKET ASSEMBLY
2	1	D3305-1	FOAM
3	1	D3306-041	COVER ASSEMBLY

NOTES:

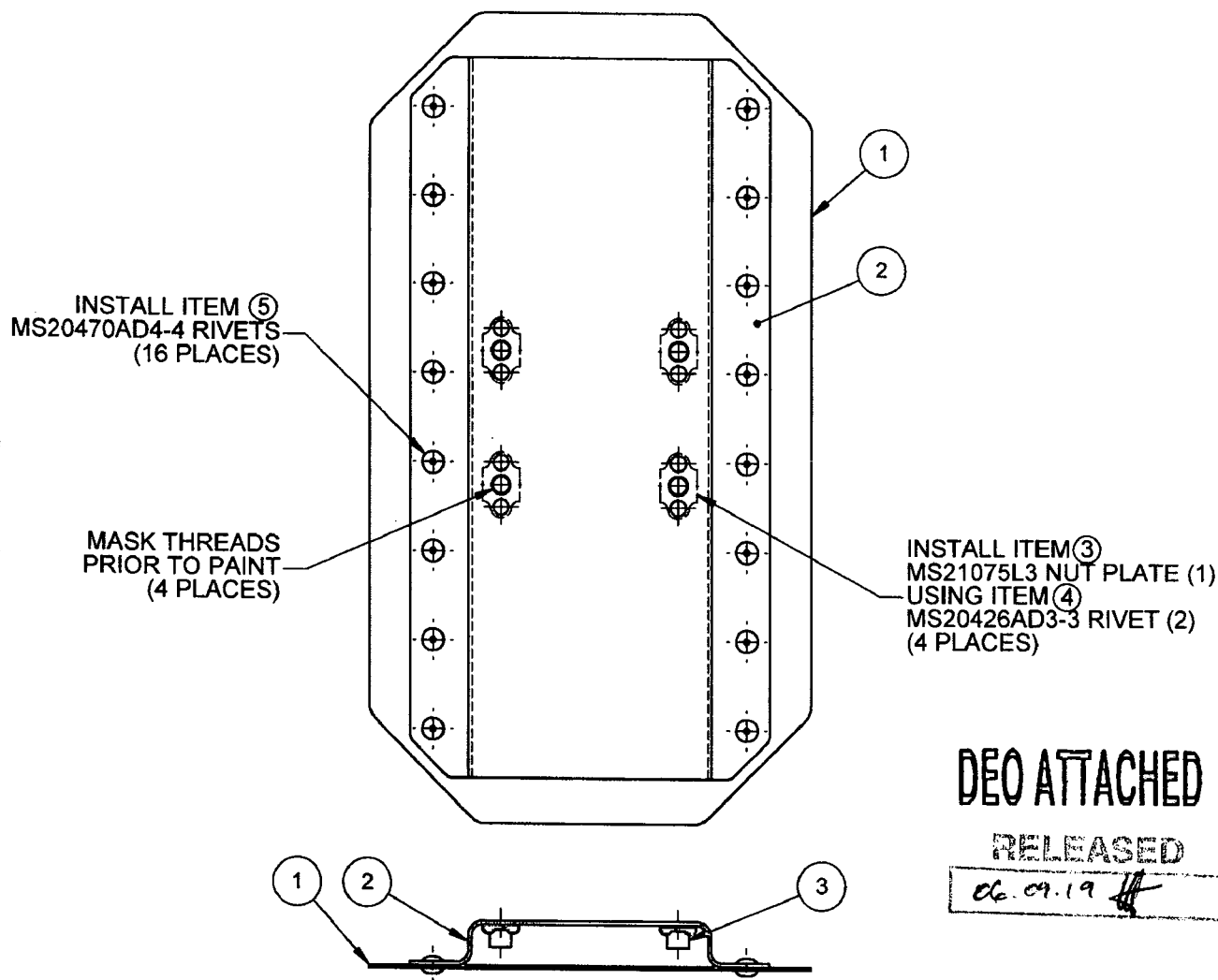
- 1) BOND D3305-1 FOAM TO D3303-043 BRACKET ASSEMBLY USING 3M 1300 ADHESIVE (0.002" TO 0.010" THICK) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS
- 2) COVER HEAD REST WITH D3306-041 COVER ASSEMBLY AS SHOWN
- 3) PART IS SYMMETRICAL AT CENTERLINE
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 6) IDENTIFY AS FOLLOWS USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD, P/N D3303-041 B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"

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DESIGN <i>PH</i>	DRAWN BY <i>B</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3303	REV. B SHEET 2 OF 4
DATE 06.08.17		TITLE HEAD REST	SCALE 1:2



DEO ATTACHED

RELEASED

06.09.19 *[Signature]*

D3303-043 BRACKET ASSEMBLY

ITEM	QTY -043	P/N	DESCRIPTION
	X	D3303-043	BRACKET ASSEMBLY
1	1	D3303-1	PLATE
2	1	D3303-3	HEAD REST
3	4	MS21075L3	NUT PLATE
4	8	MS20426AD3-3	RIVET
5	16	MS20470AD4-4	RIVET

NOTES:

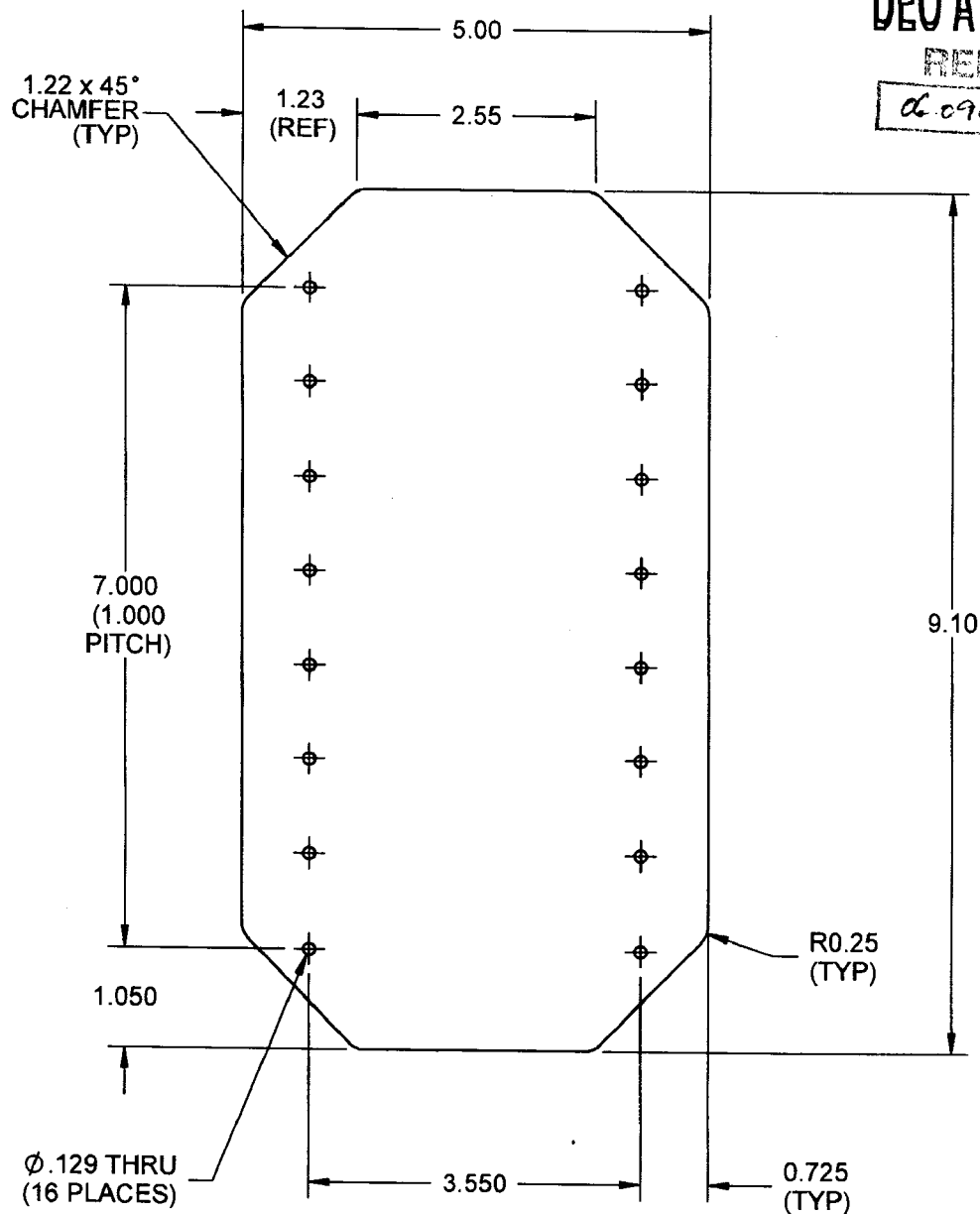
- 1) FINISH: POWDER COAT ASSEMBLY GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

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CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3303	REV. B SHEET 3 OF 4
DATE 06.08.17		TITLE HEAD REST	SCALE 1:2



D3303-1 PLATE

NOTES:

- 1) MATERIAL: 2024-T3 (QQ-A-250/4) 0.032 THICK SHEET
(REF. DART SPEC. M2024T3S.032)
- 2) FINISH: CHEMICAL CONVERSION COAT AS PER DART QSI 005.4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

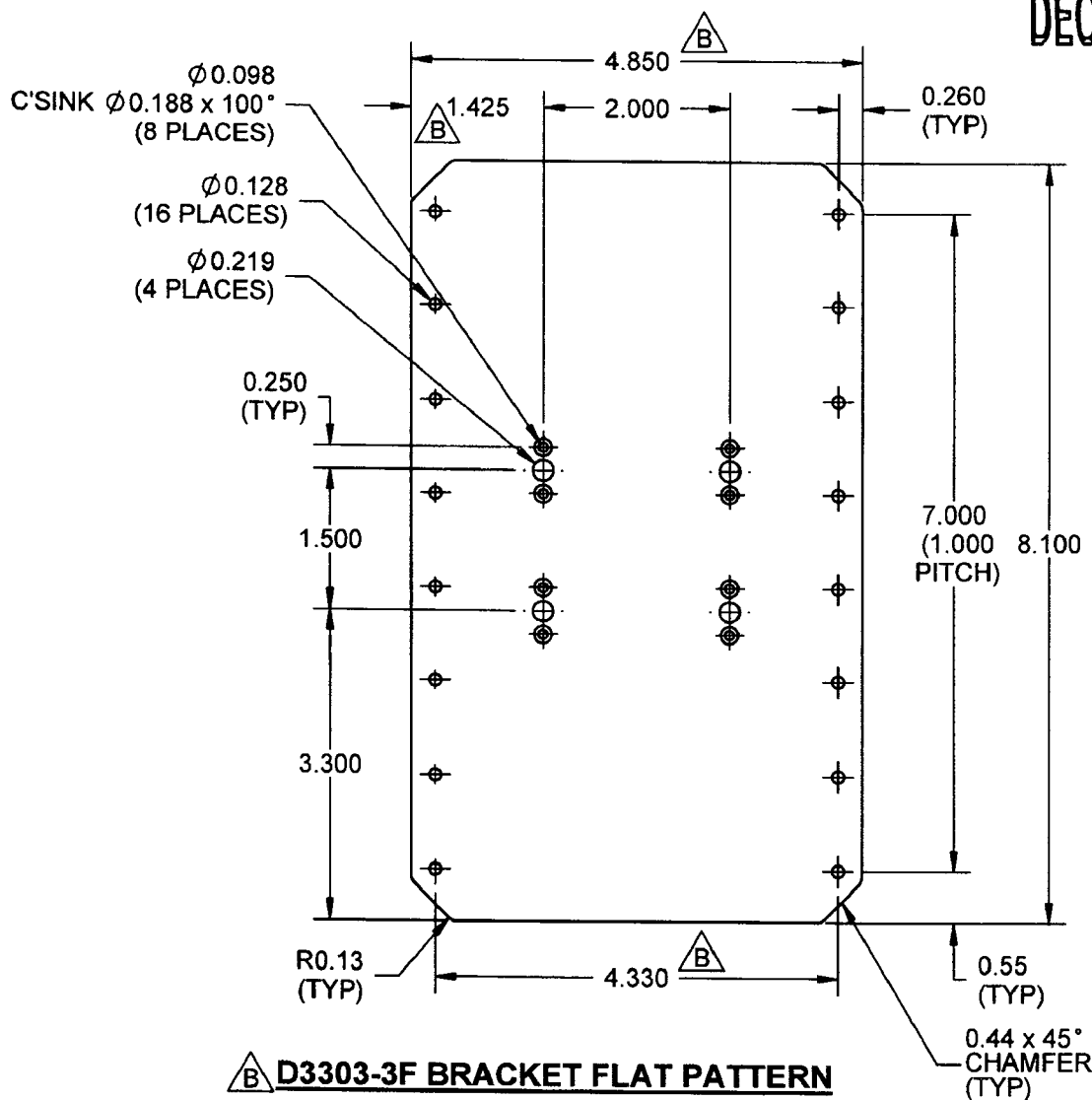
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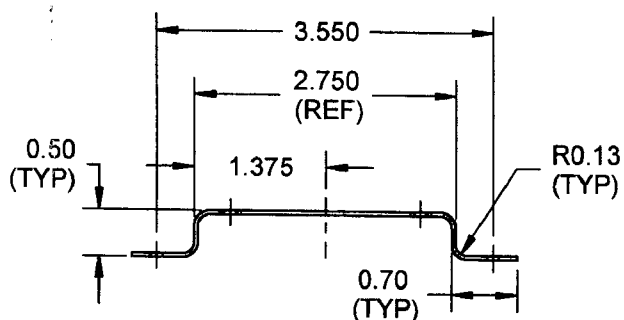


DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3303	REV. B SHEET 4 OF 4
DATE 06.08.17		TITLE HEAD REST	SCALE 1:2

DEO ATTACHED



D3303-3F BRACKET FLAT PATTERN



D3303-3 BRACKET BEND DETAIL

NOTES:

- 1) MATERIAL: 2024-T3 (QQ-A-250/4) 0.040 THICK SHEET (REF. DART SPEC. M2024T3S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT AS PER DART QSI 005.4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

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DRAWING NO. D3303	TITLE HEAD REST	REV. B	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D3303-B-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN AJS	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>		DE APPR. <i>[Signature]</i>		
DATE 08.10.15	DATE 08.10.15	DATE 08/10/16	DATE 08/10/16		DATE 08/10/16		

SHEET 1 ADD 1300L ADHESIVE BY 3M TO NOTE 1 AS FOLLOWS:

IS:

NOTES:

- 1) BOND D3305-1 FOAM TO D3303-043 BRACKET ASSEMBLY USING 3M 1300 OR 1300L ADHESIVE (0.002" TO 0.010" THICK) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS

WAS:

NOTES:

- 1) BOND D3305-1 FOAM TO D3303-043 BRACKET ASSEMBLY USING 3M 1300 ADHESIVE (0.002" TO 0.010" THICK) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS

SEE NCR 08-069 FOR FURTHER DETAILS

RELEASED
[Signature]